

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A tissue bonding article, comprising:
a flexible material;
an adhesive substance applied over covering substantially the entire bottom side of said flexible material; and
a polymerizable adhesive composition permeated throughout at least a portion of said flexible material.

Claim 2 (Original): The article of claim 1, wherein said flexible material is a mesh.

Claim 3 (Original): The article of claim 1, wherein said flexible material comprises perforations or tear lines.

Claim 4 (Original): The article of claim 1, wherein said flexible material is flexible and porous.

Claim 5 (Original): The article of claim 1, wherein said flexible material is substantially free of elastin.

Claim 6 (Original): The article of claim 1, wherein said flexible material is elastic.

Claims 7-10 (Canceled)

Claim 11 (Original): The article of claim 1, wherein said adhesive substance is a pressure sensitive adhesive.

Claim 12 (Original): The article of claim 11, wherein said pressure sensitive adhesive has a weaker bonding strength than said polymerizable adhesive composition.

Claim 13 (Original): The article of claim 1, wherein said adhesive substance does not interact with said polymerizable adhesive composition.

Claim 14 (Original): The article of claim 1, wherein said polymerizable adhesive composition is a monomeric composition.

Claim 15 (Original): The article of claim 1, wherein said polymerizable adhesive composition is polymerized.

Claim 16 (Original): The article of claim 1, wherein said polymerizable adhesive composition comprises a 1,1-disubstituted monomer.

Claim 17 (Original): The article of claim 1, wherein said polymerizable adhesive composition comprises a cyanoacrylate monomer.

Claim 18 (Original): The article of claim 1, wherein said polymerizable adhesive composition, after polymerization, substantially covers surfaces on at least said bottom side and a top side of said flexible material.

Claim 19 (Original): The article of claim 18, wherein said polymerizable adhesive composition, after polymerization, substantially does not cover said adhesive substance.

Claim 20 (Original): The article of claim 1, further comprising a polymerization initiator or rate modifier for said polymerizable adhesive composition disposed in or on said flexible material.

Claim 21 (Original): The article of claim 20, wherein said polymerization initiator or rate modifier is immobilized on said flexible material.

Claim 22 (Original): The article of claim 1, further comprising a bioactive material disposed in or on said flexible material.

Claim 23 (Original): The article of claim 22, wherein said bioactive material is not immobilized on said flexible material, but is soluble or dispersible in said polymerizable adhesive composition.

Claim 24 (Original): The article of claim 1, wherein the flexible material is biodegradable.

Claim 25 (Original): The article of claim 1, wherein the flexible material is not biodegradable.

Claim 26 (Previously presented): A tissue bonding article, comprising:
a flexible material;
an adhesive substance applied over at least a portion of a bottom side of said flexible material; and
a polymerizable adhesive composition permeated throughout at least a portion of said flexible material, wherein the flexible material and the polymerizable adhesive composition are together biodegradable.

Claim 27 (Original): The article of claim 1, wherein the flexible material and the polymerizable adhesive composition are together not biodegradable.

Claim 28 (Original): The article of claim 1, wherein the article is opaque.

Claim 29 (Original): The article of claim 1, wherein the article is translucent.

Claim 30 (Canceled)

Claim 31 (Previously presented): The article of claim 1, wherein said adhesive substance is permeated by said polymerizable adhesive composition.

Claim 32 (Previously presented): The article of claim 1, wherein said flexible substrate does not include features that penetrate an underlying substrate during use.

Claim 33 (Canceled)

Claim 34 (Currently Amended): A method of bonding tissue, comprising:

placing a flexible substrate over a section of tissue, wherein said flexible substrate comprises a flexible material and an adhesive substance applied ~~over~~ covering substantially the entire bottom side of said flexible material;

applying a polymerizable adhesive composition over and substantially covering at least a portion of the flexible substrate; and

allowing the polymerizable adhesive composition to permeate into and under the flexible substrate and polymerize to form a composite structure bonded to said tissue.

Claim 35 (Original): The method of claim 34, wherein said section of tissue includes a wound to be closed.

Claim 36 (Previously presented): The method of claim 35, wherein said placing comprises:

fixing a first portion of said flexible substrate to said section of tissue on a first side of said wound;

approximating edges of said wound; and

fixing a second portion of said flexible substrate to said section of tissue on a second side of said wound opposite said first side of said wound.

Claim 37 (Original): The method of claim 36, further comprising removing said first and second portions of said flexible substrate.

Claim 38 (Original): The method of claim 37, wherein a third portion of said flexible substrate remains, covering said wound.

Claim 39 (Original): The method of claim 37, wherein said removing comprises trimming said first and second portions of said flexible substrate.

Claim 40 (Currently Amended): A method of bonding tissue, comprising:

placing a flexible substrate over a section of tissue wherein said section of tissue includes a wound to be closed and wherein said flexible substrate comprises a flexible material and an adhesive substance applied ~~over at least a portion of a~~ covering substantially the entire bottom side of said flexible material;

applying a polymerizable adhesive composition over and substantially covering at least a portion of the flexible substrate; and

allowing the polymerizable adhesive composition to permeate into and under the flexible substrate and polymerize to form a composite structure bonded to said tissue wherein said placing comprises:

fixing a first lengthwise end of said flexible substrate to said section of tissue on a first lengthwise end of said wound;

approximating edges of said wound; and

fixing a second lengthwise end of said flexible substrate to said section of tissue on a second lengthwise end of said wound opposite said first lengthwise end of said wound.

Claim 41 (Original): The method of claim 35, wherein said applying comprises:

placing a quantity of said polymerizable adhesive composition on an exposed side of the flexible substrate; and

spreading the quantity of polymerizable adhesive composition to substantially cover the flexible substrate.

Claim 42 (Original): The method of claim 35, wherein:

said section of tissue has a length and a width, said length being longer than said width;

said wound has a length and a width, said length being longer than said width; and
said wound extends lengthwise in a lengthwise direction of said section of tissue.

Claim 43 (Previously Presented): The article of claim 1, wherein the flexible material is sterilized.

Claim 44 (Previously Presented): The article of claim 1, wherein the polymerizable adhesive composition is sterilized.

Claim 45 (Previously presented) The article of claim 1, wherein said polymerizable adhesive composition interacts with and/or solubilizes said adhesive substance.

Claim 46 (Currently Amended): A tissue bonding article, comprising:
a flexible material having a top side and a bottom side;
an adhesive substance applied over at least a portion of a the bottom side of said flexible material; and
a polymerizable adhesive composition applied ~~over an entire surface~~ to the entire top side of said flexible material and permeated throughout at least a portion of said flexible material.

Claim 47 (Previously presented): The article of claim 46, wherein said flexible material is a mesh.

Claim 48 (Previously presented): The article of claim 46, wherein said adhesive substance is a pressure sensitive adhesive.

Claim 49 (Previously presented): The article of claim 48, wherein said pressure sensitive adhesive has a weaker bonding strength than said polymerizable adhesive composition.

Claim 50 (Previously presented): The article of claim 46, wherein said polymerizable adhesive composition comprises a 1,1-disubstituted monomer.

Claim 51 (Previously presented): The article of claim 46, wherein said polymerizable adhesive composition comprises a cyanoacrylate monomer.

Claim 52 (Previously presented): The article of claim 46, further comprising a polymerization initiator or rate modifier for said polymerizable adhesive composition disposed in or on said flexible material.

Claim 53 (Previously presented): The article of claim 46, further comprising a bioactive material disposed in or on said flexible material.

Claim 54 (Currently Amended): A method of bonding tissue, comprising:

placing a flexible substrate over a section of tissue, wherein said flexible substrate comprises a flexible material having a top side and a bottom side, and an adhesive substance applied over at least a portion of a the bottom side of said flexible material;

applying a polymerizable adhesive composition ~~over~~ to and substantially covering an ~~entire surface of the~~ entire top side of the flexible material substrate; and

allowing the polymerizable adhesive composition to permeate into and under the flexible substrate and polymerize to form a composite structure bonded to said tissue.

Claims 55 (Previously presented): The method of claim 40, wherein:

said section of tissue has a length and a width, said length being longer than said width;

said wound has a length and a width, said length being longer than said width; and
said wound extends lengthwise in a lengthwise direction of said section of tissue.